

Revision 2

1608

01/19/76

THREE MILE ISLAND NUCLEAR STATION  
STATION HEALTH PHYSICS PROCEDURE 1608  
AIR SAMPLING FOR TRITIUM

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Unit 1 Staff Recommends Approval

Approval NA Date \_\_\_\_\_  
Cognizant Dept. Head

Unit 2 Staff Recommends Approval

Approval NA Date \_\_\_\_\_  
Cognizant Dept. Head

Unit 1 PORC Recommends Approval

J.P. Blanton Date 1-2-76  
Chairman of PORC

PORC comments of \_\_\_\_\_ included  
(date)

By \_\_\_\_\_ Date \_\_\_\_\_

Unit 2 PORC Recommends Approval

Norman Williams Date 1/7/76  
Chairman of PORC

PORC comments of \_\_\_\_\_ included  
(date)

By \_\_\_\_\_ Date \_\_\_\_\_

Approval NA Date NA  
Mgr., Operational  
Quality Assurance

Approval J. Miller / J. G. Galt Date 1/19/76 / 1-19-76  
Station Superintendent  
Unit Superintendent

THREE MILE ISLAND NUCLEAR STATION  
STATION HEALTH PHYSICS PROCEDURE  
1608 - Air Sampling for Tritium

1.0 PURPOSE

The purpose of this procedure is to describe in detail the procedure for Air Sampling for Tritium.

2.0 DISCUSSION

Tritium is a radioactive form of hydrogen which exists in nature in very small amounts; but can be produced artificially by a nuclear reaction. Tritium has a half life of 12.26 years. Since Tritium emits a soft Beta (18 KeV) and it can be a potential internal hazard, monitoring is difficult and counting must be done by internal liquid scintillation counting.

3.0 REFERENCES

- 3.1 Radiological Health Handbook, Page 231
- 3.2 10 CFR 20, Appendix B, Table I or II
- 3.3 HPP 1741 and P.C.P. 1951

4.0 EQUIPMENT

- 4.1 Tritium Sampler -
- 4.2 Stop Watch

5.0 OPERATING INSTRUCTIONS

- 5.1 Take jar containing 100ml demineralized water and screw jar to collector.

- 5.2 Connect Tritium Air Sampler to power outlet.
- 5.3 Simultaneously start air sampler and stop watch.
- 5.4 Adjust flow to 500 cc/min.
- 5.5 Switch off air sampler after 8 minutes, elapsed time.
- 5.6 Unscrew jar and take sample to lab for preparation and counting as per P.C.P. 1951 and H.P.P. 1741, respectively.
- 5.7 Forward data to H.P. Supervisor for review and approval.



TMI DOCUMENTS

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